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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,244	07/03/2002	Walter Paul Mayer	UC17974-1	5052

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THE DOW CHEMICAL COMPANY
INTELLECTUAL PROPERTY SECTION
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MIDLAND, MI 48641-1967

EXAMINER

SHOSHO, CALLIE E

ART UNIT PAPER NUMBER

1714

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,244

Applicant(s)

MAYER ET AL.

Examiner

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/18/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 7-8, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Oiyama et al. (U.S. 4,734,330).

Oiyama et al. disclose coating comprising 10 parts binder, 2 parts magnetic powder, and 200 parts organic solvent. The binder is used to disperse the magnetic powder and is obtained from vinyl chloride, vinyl acetate, and monomer containing sulfonic acid groups. The magnetic powders include iron oxide and chromium oxide, which are identical to the pigments utilized in the present invention. There is also disclosed coated substrate produced by coating substrate with the above coating (col.2, lines 21-33, col.2, line 60-col.3, line 4, col.6, lines 51-54, col.11, lines 12-17 and 32-37, and col.12, lines 30-65).

Although there is no explicit disclosure of the Viscosity Retention Factor of the polymer, given that Oiyama et al. disclose polymer identical to that presently claimed, i.e. obtained from

vinyl chloride, vinyl acetate, and monomer having sulfonic acid group, it is clear that the polymer would inherently possess Viscosity Retention Factor identical to that presently claimed.

In light of the above, it is clear that Oiyama et al. anticipate the present claims.

3. Claims 1-2, 5, 7-8, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Mallon et al. (U.S. 5,531,914).

Mallon et al. disclose coating composition comprising 30-35% copolymer obtained from vinyl chloride, vinyl acetate, and (meth)acrylate having sulfonic acid group such as sulfoethyl methacrylate, 65-70% metallic pigment, and solvent including ketones and esters. The copolymer is used to disperse the metallic pigment. There is also disclosed coated substrate produced by coating substrate with the above coating (col.1, lines 10-14, col.1, line 65-col.2, line 23, col.2, lines 34-40, col.4, lines 45-53, col.5, lines 12-14 and 37-50, and col.7, lines 8-20).

Although there is no explicit disclosure of the Viscosity Retention Factor of the polymer, given that Mallon et al. disclose polymer identical to that presently claimed, i.e. obtained from vinyl chloride, vinyl acetate, and monomer having sulfonic acid group, it is clear that the polymer would inherently possess Viscosity Retention Factor identical to that presently claimed.

In light of the above, it is clear that Mallon et al. anticipate the present claims.

4. Claims 1-4, 7-8, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurose et al. (U.S. 5,510,140).

Kurose et al. disclose coating comprising 100-200 parts magnetic powder, binder obtained from vinyl chloride, vinyl acetate, and monomer containing sulfo group, carbon black, and solvent including ketones and esters. The magnetic powder includes iron oxide that is identical to pigment utilized in present invention. The coating possesses viscosity of 5-100 cP. There is also disclosed coated substrate produced by coating substrate with the above coating (col.12, lines 46-49, col.17, lines 25-30, col.19, lines 10-15, col.20, lines 11-14 and 32-63, col.21, lines 15-16, col.25, line 43, and col.26, lines 26-39 and 49-54).

Although there is no explicit disclosure of the Viscosity Retention Factor of the polymer or that the polymer is effective to inhibit agglomeration of the pigment particles when dispersed in liquid medium, given that Kurose et al. disclose polymer identical to that presently claimed, i.e. obtained from vinyl chloride, vinyl acetate, and monomer having sulfonic acid group, it is clear that the polymer would inherently possess Viscosity Retention Factor identical to that presently claimed and that the polymer would inherently be effective in inhibiting agglomeration of the pigment particles when dispersed in liquid medium.

In light of the above, it is clear that Kurose et al. anticipate the present claims.

5. Claims 1-2, 5-8, and 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Otake et al. (U.S. 5,994,485).

Otake et al. disclose coating comprising 5-50 parts binder obtained from vinyl chloride, vinyl acetate, and monomer with sulfonic acid group such as sulfoethyl methacrylate and 100 parts pigment. It is also disclosed that organic solvent "may" be used. There is also disclosed

coated substrate produced by coating substrate with the above coating (col.1, lines 10-17, col.3, lines 26-29, col.5, lines 4-13, and col.6, line 60-col.7, line 21).

Although there is no explicit disclosure of the Viscosity Retention Factor of the polymer or that the polymer is effective to inhibit agglomeration of the pigment particles when dispersed in liquid medium, given that Otake et al. disclose polymer identical to that presently claimed, i.e. obtained from vinyl chloride, vinyl acetate, and monomer having sulfonic acid group, it is clear that the polymer would inherently possess Viscosity Retention Factor identical to that presently claimed and that the polymer would inherently be effective in inhibiting agglomeration of the pigment particles when dispersed in liquid medium.

In light of the above, it is clear that Otake et al. anticipate the present claims.

6. Claims 1-2, 5-9, and 11-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Schwartz et al. (U.S. 6,136,383).

Schwartz et al. disclose coating composition comprising monomer, 50-90% polymeric binder, obtained from monomers including vinyl chloride, vinyl acetate, and acrylamido-2-methylpropanesulfonic acid, and 10-50% pigment. There is also disclosed coated substrate produced by coating substrate with the above coating. The coating is applied using hot melt process, i.e. coating is solid (col.1, lines 6-7, col.12, lines 27-32, col.15, lines 19-22, 40, 55, and 65-66, col.16, line 42, and col.17, lines 15-33).

Although there is no explicit disclosure of the Viscosity Retention Factor of the polymer or that the polymer is effective to inhibit agglomeration of the pigment particles when dispersed

in liquid medium, given that Schwartz et al. disclose polymer identical to that presently claimed, i.e. obtained from vinyl chloride, vinyl acetate, and monomer having sulfonic acid group, it is clear that the polymer would inherently possess Viscosity Retention Factor identical to that presently claimed and that the polymer would inherently be effective in inhibiting agglomeration of the pigment particles when dispersed in liquid medium.

In light of the above, it is clear that Schwartz et al. anticipate the present claims.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Eguchi et al. (U.S. 4,743,501), Yamakawa et al. (U.S. 4,851,465), and Nakamura et al. (U.S. 4,600,521) each disclose coating comprising magnetic powder and polymer obtained from vinyl chloride, vinyl acetate, and monomer having sulfonic acid group.

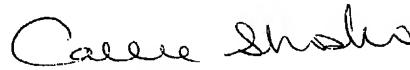
EP 129329 discloses pigment dispersion comprising pigment and acrylic acid/2-acrylamido-2-methyl-propane sulfonic acid copolymer, however, there is no disclosure of polymer obtained from vinyl chloride, vinyl acetate, and monomer having sulfonic acid group as required in the present claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
3/4/04